

2010/9/06





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1. Recommended PC Specification

CPU Core2Duo 2.13GHz and above

Memory 2 GB or above

Windows XP with SP2 or above. Windows Vista / Windows

Operating System 2003 / Windows 7

Internet Explorer 6.0 SP2 and above.

Video Resolution SVGA or XGA with 1024x768 resolution



2. Preparation before setup

Connect to device and setup IP

Our IP device provides access through Internet Explorer. The IP address for your PC must be within the same subnet as the IP device. You need to match the TCP/IP settings between PC and IP device before you can access it via IE.

There are two ways to add devices to the network.

With DHCP server / router:

DHCP server assigns IP addresses to devices automatically. You can find them on the network with our **IP Utility**. It is available on NVR CD and our website:

http://www.acti.com/IP_Utility

Run IP Utility to start auto device search. Click on the underlined IP links to access your IP devices. You do not need to change IP.

Without DHCP server / router:

Please assign a static IP for each device and add them one by one. Connect to the first device by following steps 1 to 5 below.

Before adding more devices into the network, you need to change the current device to a new IP address so no two devices have IP conflict. (Steps 6 to 9).

For adding devices without DHCP, please see following steps.

- Connect the PC to the Network Switch with the CAT5 cable, and change your PC's IP to 192.168.0.99 / Subnet Mask 255.255.255.0 (101 is just a sample, it may be any number from 1 to 254 except 100.)
- 2. Connect the device to your Network Switch. If it is a PoE enabled Switch, then the device is powered on. If it is NOT a PoE enabled Switch, please also plug in the Power Adapter.

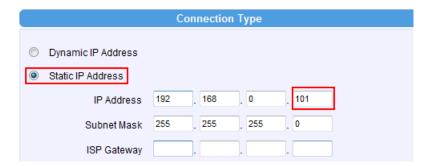


 Open Internet Explorer (Version 6.0 or above), and type in Default IP: http://192.168.0.100

4. When you see the login window, please input default user and password:

Default Username: Admin Password: 123456

- 5. After you log in, you will see the video from IP device. To go to the main menu, click the "Setup" button on the top left.
- Please go to IP settings -> Connection Type. Change the IP mode to Static and the IP address to 192.168.0.101 or any other unused IP (Avoid 192.168.0.100, the IPs of your PCs and other devices already in network.). Click "Apply" then click System -> Save & Reboot.



- 7. Internet Explorer will close after a few seconds. This is normal.
- 8. Wait for 30 seconds and open IE again by typing in the new IP. (In this example, 192.168.0.101). For later device you add into the network, please choose an IP that does not is not used by any existing device.
- 9. If you have more than one device, continue again from step 2. Assign different new IP to each camera (for instance -> 192.168.0.102, 192.168.0.103 ...). You do not need to unplug the existing devices from the switch because there is no IP conflict.



Sample screenshots to setup IP of your PC (Win XP)

The procedures below show how to setup your IP on Windows XP. If you use operating system other than Windows XP, please refer to OS manuals for proper setup procedures.

STEP1

Start up your PC.

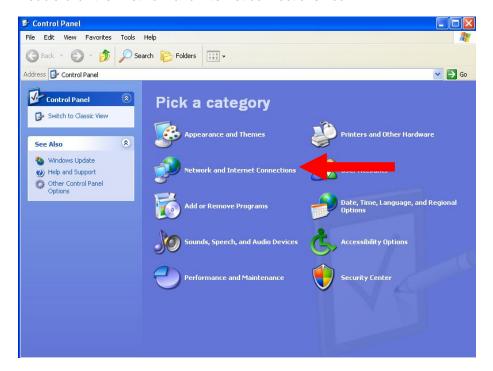
STEP2

Click the [Start] and select the "Control Panel"



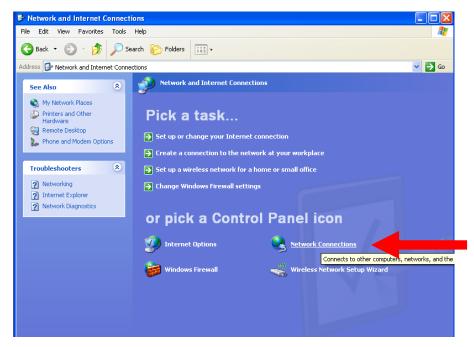
STEP3

Double-click the "Network and Internet connections" icon.



STEP4

Double-click the "Network connections" icon

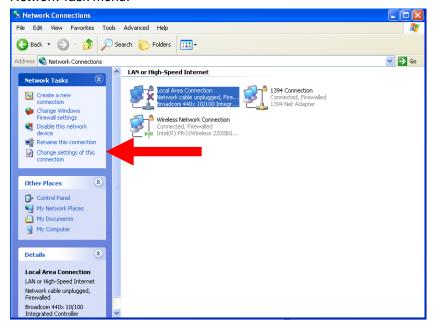


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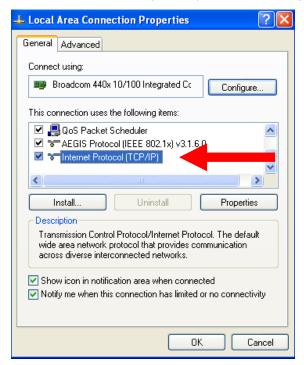
STEP5

Click "Local Area Connections", and then click "Change settings of this connection" in the Network Task menu.



STEP6

Click "Internet Protocol (TCP/IP)", and then click [Properties]

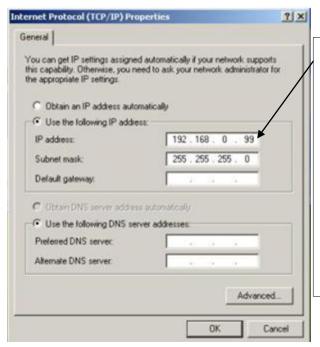


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STEP7

Click the "Use the following IP address" radio button and enter the IP address and the subnet mask.



Please set the settings as below.

IP address: 192.168. 0.xxx
Subnet mask: 255.255.255. 0
(NOTE: xxx should be a number from 1 to 254 except 100, which is used by the IP device. Please also make sure that no two equipments use the same IP address in the same network.)

STEP8

Click the [OK] button and the window dialog box will close.



3. Configuring the IP device

This section describes how to configure the IP device. The administrator has unlimited access to all settings, while the normal user can only view live video. The IP device is configured under a standard browser (Microsoft Internet Explorer 6.0 or above).

Login

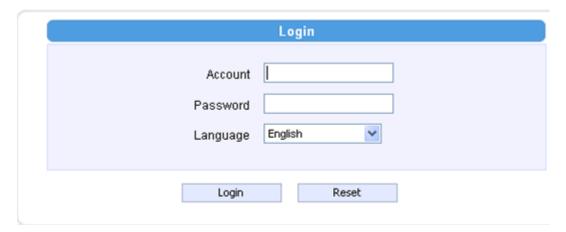
STEP1

Open Internet Explorer 6.0 or above. You may download the latest version from: http://www.microsoft.com/windows/ie/downloads/default.mspx

STEP2

Enter the IP address of the IP device and press enter to go to Login Page.

The default IP address is "192.168.0.100"



STEP3

Enter the Account name and the Password

(Default Account: Admin / Password: 123456).

STEP4

Select the language of the IP device user interface.

You can select between English, Traditional Chinese, Japanese, Spanish, Italian, German, Portuguese, Greek, Russia, Turkey, Indonesia and Swedish. This user interface setting will disappear once you log out, if you want to change the default user interface language, please



go to [Host] in the "Host" section under the setup tab.

STEP5

Click the button to login or click the button to re-enter again. Once you've logged in, the "Live page" will be displayed as below.



Live view

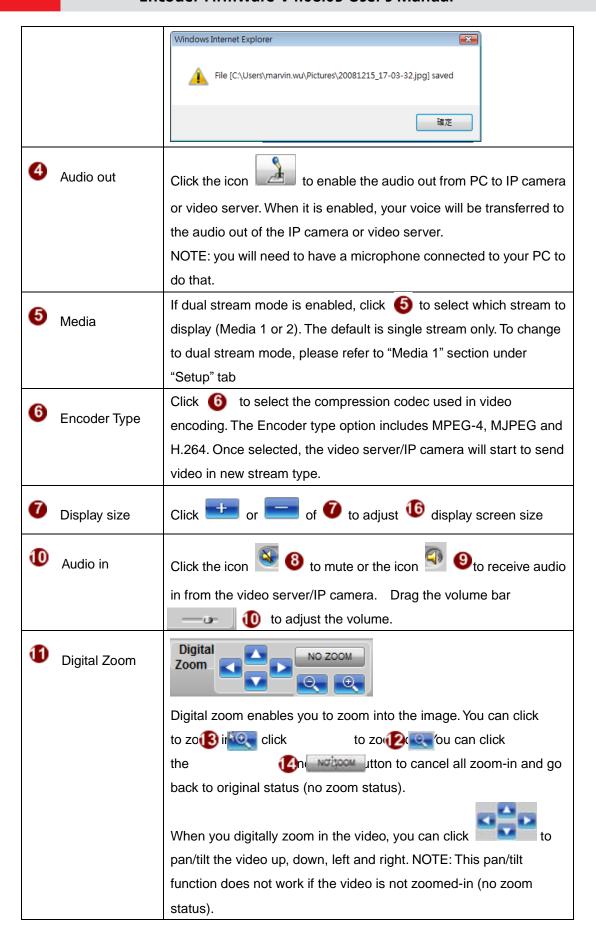
Click the • [Live] tab to show [Live page]. Refer to the table below for how to configure each setting.



Function List

Function	Description
2 Full Screen	Click the icon to stretch the preview to full screen. You can
	click "Esc" button on the keyboard to return to previous display.
3 Snapshot	Click the icon "to take a snapshot. The snapshot picture
	will be saved to the default folder
	"C:\Users\"account name"\Picture", in the format of
	YYYYMMDD_HH_mm_ss.jpg.



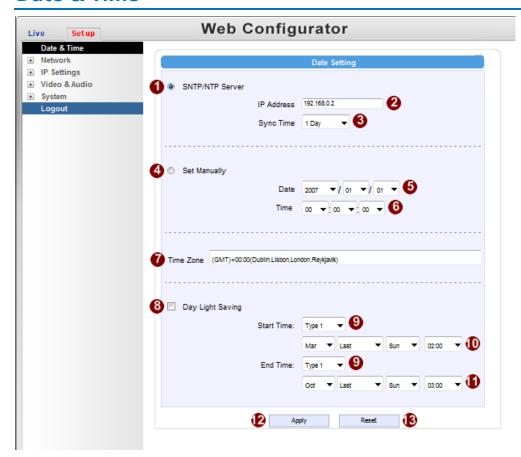




Network status	Indicates the network state. If the light on the right is green, it means the network is ok. If the light is gray, it means the network is broken. The light on the left is not used
DO Setting	to set DO output level to High. Click to set DO output level to Low. If your device has more than one DO available, each DO is controlled separately.

If you want to setup this IP camera/video server, please click the [Setup] tab to switch to "Setup Page"

Date & Time



Click the [Date & Time] item under Setup to see Date Setting Page. Refer to the table below for how to configure each setting. The default method is to set manually.

Date Setting

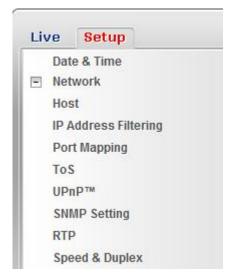
Parameters	Description
	Click this to enable IP device's SNTP/NTP function. This enables this IP
	device to synchronize its time settings with a SNTP/NTP server. You can
	use this function to make sure all your IP devices' time is the same.
1 SNTP/NTP	Additionally, with our embedded digital-time-code in the streaming, you
server	can tell the event sequence accurately.
Sei vei	2 IP address: Enter the IP address of the SNTP/NTP server.
	3 Sync time : Select the time interval for this IP device to synchronize
	its time.
Set manually	Click this to manually setup the date & time.
	Date: Select the date
	6 Time: Select the time



Time zone	Select the time zone offset for local settings
	Select Type 1 <a>9 to specify daylight saving time by week number in a
8 Day Light	month; select Type 2 to specify daylight saving time by date.
	10 Start Time: Select the daylight savings start time.
Saving	10 End Time: Select the daylight savings end time.

Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

Network Section

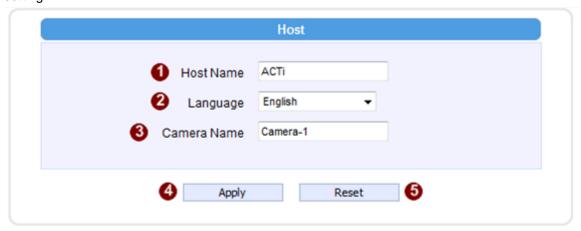


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Host

Click the [Host] to enter Host settings page. Refer to the table below for how to configure each setting.



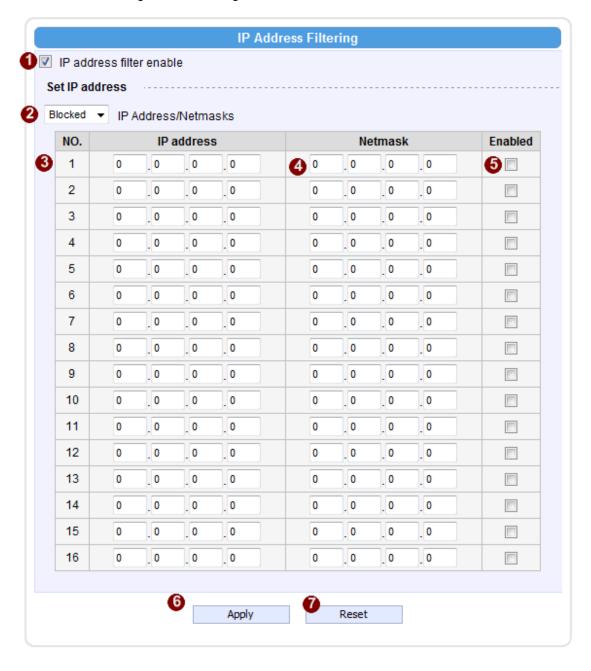
	Parameters	Description
0	Host name	Enter a host name, and this host name will be shown when you
		use the IP utility or the SDK to search for the IP device.
2	Language	Select the language of default user-interface. Each user login will
		see the default user-interface first.
3	Camera name	The camera name is reserved for customer use.

Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

IP Address Filtering

WARNING: Please be very careful when using this function, as you may lose access to your camera if you make mistakes in setup. You may either accidentally deny yourself access, or forgot to include your own IP address in the allowed address list. You will need to perform hard reset to be able to access the device again.

Click the [IP Address Filter] item to display the "IP Address Filtering Page". Refer to the table below for how to configure each setting.



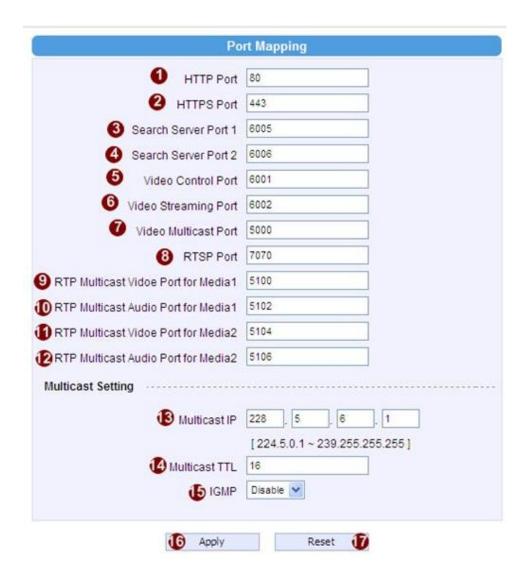


	Parameters	Description
•	IP address	Olas I distribute de cardia ID Addissa Ethadas
U	filter enable	Check this box to enable IP Address Filtering.
		The filter can be set in either "Allow" mode or "Block" mode.
		1. "Allow" mode will refuse access to all IP addresses except the ones
•	Filter Method	listed below.
Ø	Filter Method	2. "Block" mode will accept all incoming access except the IP
		addresses listed below.
		Make sure you include the Netmask in your consideration.
•	IP Address	The IP address you wish to allow or block. Please note that the actual
9	IF Address	range is modified by the Netmask.
		Using Netmask allows you to set filtering for a whole range of IP address
		at once, without the need to enter all of them individually. If you are not
	Netmask	sure about the function of netmask, then you should use
•	Neumask	255.255.255.255, and it will affect only a single IP address per line of
		entry, or use 255.255.255.0 to use the same setting for all IP addresses
		starting with the same three numbers
		For each entry, you must check this box for it to be effective. For an entry
		that you no longer need but does not wish to delete, you can uncheck it,
6	Enable	and the system will remember it for future use. If a new entry that has
		never been used before does not have Enable checked, then it will not be
		stored in memory.
		Click this to use the current displayed info to do IP Address filtering. If you
6	Apply	setup correctly, it will change into a grayed out "Success" in a few
		seconds.
0	Reset	Click this button to re-enter the parameters.
9	reset	Click this button to re-enter the parameters.

Click the **6** [Apply] button to confirm the settings or click the **7** [Reset] button to re-enter the parameters.

Port Mapping

Click the [Port Mapping] item to display the "Port Mapping Page". Refer to the table below for how to configure each setting.



Parameters	Description
1 HTTP port	Select the port assigned for HTTP protocol access
2 HTTPS	Select the port assigned for HTTPS protocol access
O Coord corver port1	Select the first port used by server search applications to detect
3 Search server port1	this IP device. (e.g. IP utlity)
1	Select the first port used by server search applications to detect
4 Search server port2	this IP device. (e.g. IP utlity)

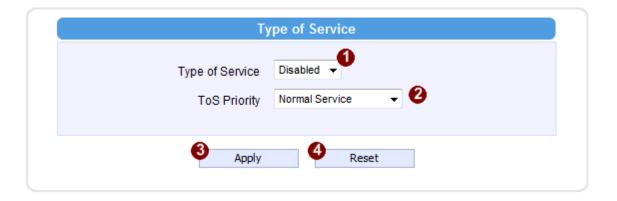


r :	
Video control port	Select the port used to support video control function by
Video control port	application programs. (e.g. NVR)
Video streaming port	Colored the ground word by this ID device for Video Chromeina
(TCP Only)	Select the port used by this IP device for Video Streaming.
Video Multicast Port	Enable/disable multicast audio streaming
8 RTSP port	Select the port assigned for RTSP protocol access
RTP Multicast Video	Select the port for the multicast video streaming of media1 via
Port for Media1	RTP protocol
RTP Multicast Audio	Select the port for the multicast audio streaming of media1 via
Port for Media1	RTP protocol
RTP Multicast Video	Select the port for the multicast video streaming of media2 via
Port for Media2	RTP protocol
RTP Multicast Audio	Select the port for the multicast audio streaming of media2 via
Port for Media2	RTP protocol
(B) Multicast IP	Select the multicast IP. Default settings is 228.5.6.1
Multicast TTL	Select the multicast TTL. Default setting is 255.
₫ IGMP	Select video type connected to the video-in of this IP device. If
IGIVIF	you use an incorrect video type, some images might be lost.

Click the **(6)** [Apply] button to confirm the settings or click the **(7)** [Reset] button to re-enter the parameters.

ToS

Click the [ToS] (Type of Service) item to display the "ToS Page". Refer to the table below for how to configure each setting.



	Parameters	Description
0	TOS (type of service)	Select whether to add the TOS tag onto the streaming data.
		Streaming data with a higher priority TOS tag will be transmitted
		first when compared with other data.
2	TOS priority	Select the TOS tag's priority to be added onto the streaming. You
		can select between
		1.Minimize-Delay
		2.Maximize-throughout
		3.Maximize-Reliability
		4.Normal-Service

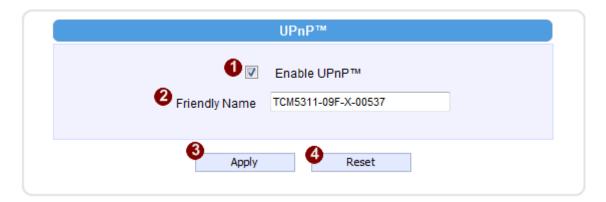
Click the 3 [Apply] button to confirm the settings or click the 4 [Reset] button to re-enter the parameters.

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$UPnP^{TM}$

Click the [UPnP $^{\text{TM}}$] item to display the "UPnP $^{\text{TM}}$ Setting Page".

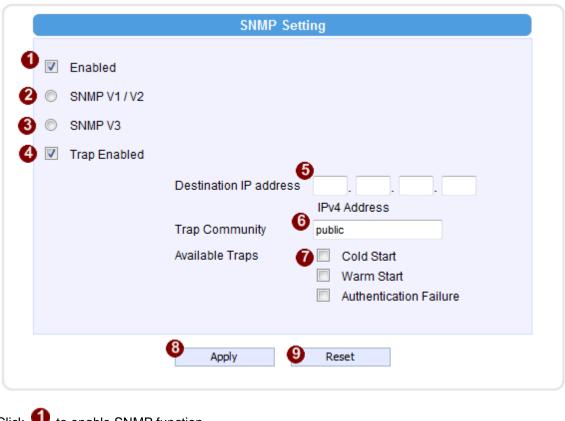


Click the [Apply] button **3** to confirm the settings or click the [Reset] button **4** to re-enter the parameters.

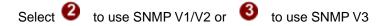


SNMP Setting

Click the SNMP Setting item to display the SNMP setting Page



Click to enable SNMP function.



Check the check box to enable traps

Enter the Destination IP address in 6

Enter the Trap Community used in 6

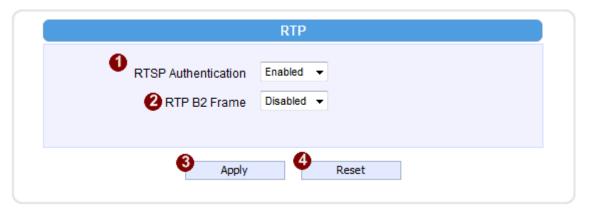
Select the Available trap in

Click the [Apply] button **8** to confirm the settings or click the [Reset] button **9** re-enter the parameters.



RTP

Click RTP Item to configure RTP Settings



0	RTSP Authen Enable	Check box to enable RTP streaming's Account/Password authentication.
2	RTP B2 Frame Enable	Check box to enable the B2 frame in RTP streaming

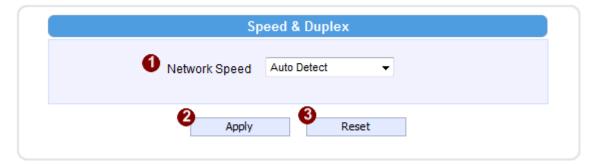
Click the [Apply] button 3 to confirm the settings or click the [Reset] button 4 to re-enter the parameters.

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Speed & Duplex

Click the [Speed & Duplex] item in the network section to display the "Speed and Duplex" Page. Refer to the table below for how to configure each setting.



Parameters	Description	
	This item lets you select the network transmission speed. You	
	can select from	
Notwork	Auto detect (default setting)	
Network	2. 100Mbps / Full duplex	
speed	3. 100Mbps / Half duplex	
	4. 10Mbps / Full duplex	
	5. 10Mbps / Half duplex	

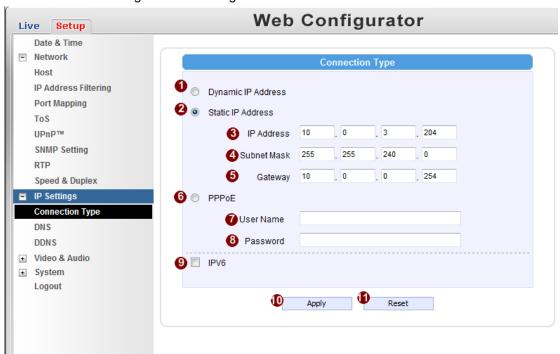
Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.



IP Settings

Connection Type

Click the [Connection Type] item to display the "Connection Type Page". Refer to the table below for how to configure each setting.



	Parameters	Description	
		Click this to enable IP device's DHCP function.	
_	Dynamic IP	It will acquire its WAN port IP address from a DHCP server within the	
U	address	same network. (You must have a DHCP server in order to enable this	
		function.)	
		Click this to manually enter the IP address.	
	Static IP	IP address: Enter the WAN port IP address.	
2		4 Subnet mask: Enter the subnet mask of WAN port. If IP address	
	address	is changed, adjust the subnet mask accordingly.	
		SP gateway : Enter the IP address of the gateway (the router).	
6		Click this when you connect IP device directly to the xDSL modem.	
		1 User name: Enter the user name of your xDSL account.	
	PPPoE	Password: Enter the password of your xDSL account.	
		Note: You have to click the [Save Reboot] after you click the [Apply	
		button] to let this IP device start xDSL connections.	
9	IPV6	Click the check box to support IPV6 protocol	



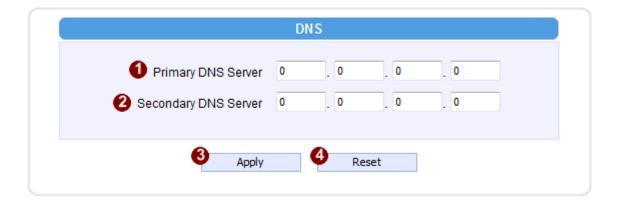
Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

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DNS

Click the [DNS] item to display the "DNS Server Settings Page". Refer to the table below for how to configure each setting.



	Parameters	Description
0	Primary DNS server	Defines the IP address of the primary DNS server. This is used for
		identifying this computer by name instead of IP address.
2	Secondary DNS server	The IP address of the secondary DNS server. It will be used once
		the primary DNS server fails.

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DDNS

Click the [DDNS] item to display the "DDNS Server Setting Page". Refer to the table below for how to configure each setting.



Parameters	Description
	Click this to enable IP device's DDNS function.
DDNS type	DDNS function enables user to connect to this IP device by domain name
	even if its IP address is not static.
Protocol /	Click one of the DDNS service providers.
Service	You can visit their website to get a DDNS service account for this IP
Reference	device.
Host name	Enter the host name of your DDNS service account. (ex: xxxx.dyndns.org)
4 User name	Enter the user name to login your DDNS service account.
6 Password	Enter the password to login your DDNS service account.

Click the **6** [Apply] button to confirm the settings or click the **7** [Reset] button to re-enter the parameters.



Video & Audio

Click the [Video & Audio] item on the "Setup Page".

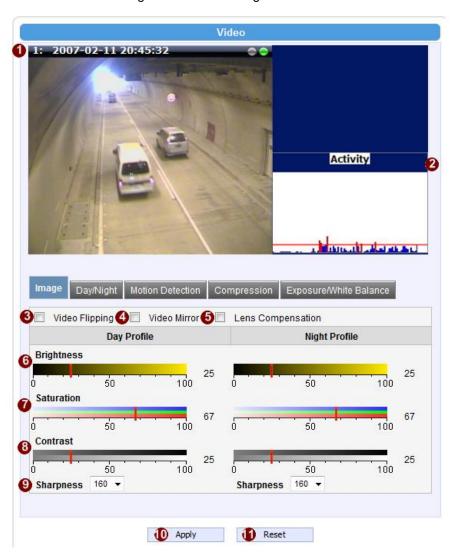
Please note that some elements may not appear on all models.

Video

Click the [Video] item to display the "Video Page". The functions here are grouped under different tabs. Starting from firmware version 4.07, there are two sets of all settings in the Video section, one for day time and one for nighttime. The camera will automatically load different profile based upon the current Day/Night status. This function allows for tailored configuration so that the camera may perform optimally under all lighting conditions.

Image (CMOS Models)

This tab concerns the general video settings. Please refer to the table below for functions.





	Parameters	Description
0	Live View	Live view of the camera
2	Activity	Motion activity status
3	Video Flipping	Check this box to flip the video up-down
4	Video Mirror	Check this box to mirror the video left-right
5	Lens Compensation	Check this box to use best pre-set settings for bundled lens
6	Brightness	Select the brightness value
7	Saturation	Select the saturation value
8	Contrast	Select the contrast value
9	Sharpness	Select the Sharpness value

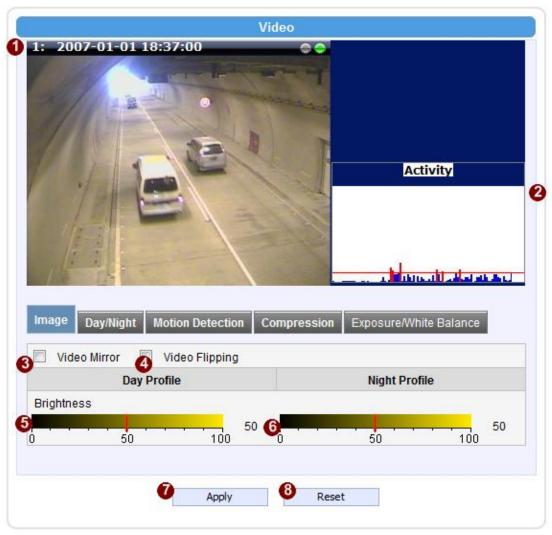
Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

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Image (Megapixel CCD Models)

This tab concerns the general video settings. Please refer to the table below for functions.



	Parameters	Description
0	Live View	Live view of the camera
2	Activity	Motion activity status
3	Video Flipping	Check this box to flip the video up-down
4	Video Mirror	Check this box to mirror the video left-right
6	Brightness	Select the daytime brightness value
	(Day Profile)	
6	Brightness	Select the nighttime brightness value
	(Night Profile)	

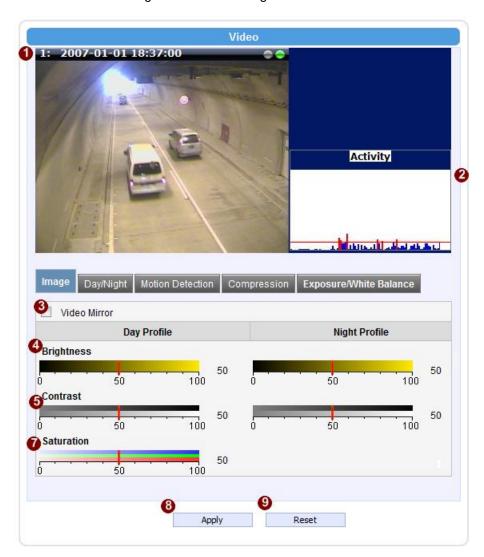
Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

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Image (CCD D1 Models)

This tab concerns the general video settings. Please refer to the table below for functions.



	Parameters	Description
0	Live View	Live view of the camera
2	Activity	Motion activity status
3	Video Mirror	Check this box to mirror the video left-right
4	Video Mirror	Check this box to mirror the video left-right
6	Lens Compensation	Check this box to use best pre-set settings for bundled lens
6	Brightness	Select the brightness value
7	Contrast	Select the contrast value

Click the 8 [Apply] button to confirm the settings or click the 9 [Reset] button to re-enter the parameters.



Day/Night (CMOS Non-D/N Models)



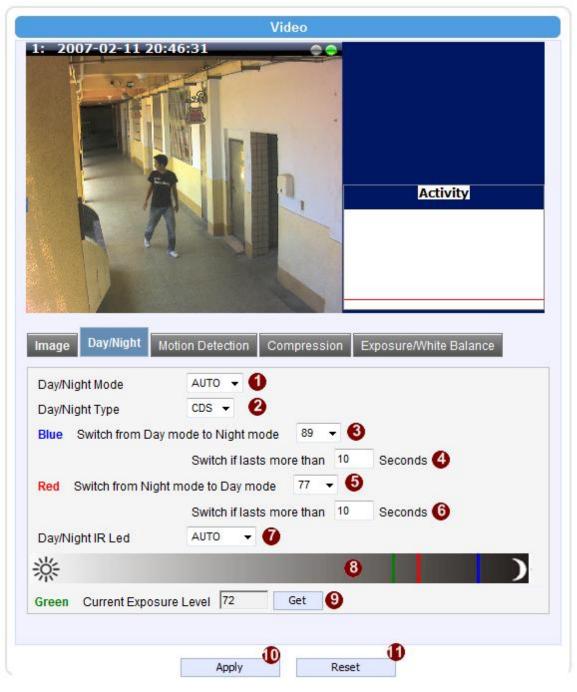
This tab concerns the day and night switch timing for your camera. Please refer to the table below.

	Parameters	Description
0	Switch from Day mode to Night mode	This value controls the level of light where camera switches into night mode. Increasing it will make camera switch to night mode at a darker illumination level.
2		The camera will only switch day/night status if the illumination level stays either above or below the boundary for this much time. This is to prevent a temporary brightness change from triggering unnecessary day/night changes.
3	Brightness Meter Bar	This bar shows the illumination level at which cameras go to night or day mode (Blue bars), and shows the current detected



		illumination level (Green bars). Use this bar to fine tune the
		day/Night switch timing.
4	Get Current Exposure Level	Clicking this button will refresh the illumination level reading from
		the camera sensor. The larger the number, the darker the
		environment.

Day/Night (CMOS D/N Models)





	Parameters	Description
	•	Select the day/night mode.
		Auto: The camera would switch between day and night mode
•	Doy/Night Mode	automatically. It will follow Day to Night and Night to Day
U	Day/Night Mode	threshold defined by user below.
		Day: The camera will stay in day (Color) mode.
		Night: The camera will stay in night (black & white) mode.
		Select the method used by Camera to determine illumination
2	Day/Night Type	level. It can be either CDS light sensor or through image analysis
		by DSP. Not every model will allow selection for this.
	Conitab france Day	This value controls the level of light where camera switches from
3	Switch from Day	Day mode into Night mode. Increasing it will make camera
	mode to Night mode	switch to Night mode at a darker illumination level.
		The camera will only switch day/night status if the illumination
	Switch if lasts more	level stays either above or below the boundary for this much
•	than X seconds	time. This is to prevent a temporary brightness change from
		triggering unnecessary day/night changes.
	Switch from Night	This value controls the level of light where camera switches into
6	Switch from Night	Day mode. Increasing it will make camera switch to Day mode at
	mode into Day Mode	a darker illumination level.
		The camera will only switch day/night status if the illumination
•	Switch if lasts more	level stays either above or below the boundary for this much
Ф	than X seconds	time. This is to prevent a temporary brightness change from
		triggering unnecessary day/night changes.
		IR LED may be configured as AUTO or Disabled here. If it is set
	Day/Night IR LED	as AUTO, LED will turn on in night mode and turn off in day
v	Day/Night IN LED	mode. If set to Disabled, LED will stay off when camera switches
		into night mode.
		This bar shows the illumination level at which cameras go to
•	Prightness Motor Par	night or day mode (Blue / Red bars), and shows the current
O	Brightness Meter Bar	detected illumination level (Green bars). Use this bar to fine tune
		the day/Night switch timing.
	Get Current	Clicking this button will refresh the illumination level reading from
9	Exposure Level	the camera sensor. The larger the number, the darker the
	Exposure Level	environment.



Day/Night (CCD D/N Models)



This tab concerns the day and night switch timing for your camera. Please refer to the table below.

	Parameters	Description
	Day/Night Mode	Select the day/night mode.
		Auto: The camera would switch between day and night mode
•		automatically. It will follow Day to Night and Night to Day
U		threshold defined by user below.
		Day: The camera will stay in day (Color) mode.
		Night: The camera will stay in night (black & white) mode.
2	Switch from Day mode to Night mode	This value controls the level of light where camera switches into
		night mode. Increasing it will make camera switch to night mode
		at a darker illumination level.



3	mode into Day Mode	This value controls the level of light where camera switches into
		Day mode. Increasing it will make camera switch to Day mode at
		a darker illumination level.
	Brightness Meter Bar	This bar shows the illumination level at which cameras go to
4		night or day mode (Blue / Red bars), and shows the current
		detected illumination level (Green bars). Use this bar to fine tune
		the day/Night switch timing.
6	Get Current Exposure Level	Clicking this button will refresh the illumination level reading from
		the camera sensor. The larger the number, the darker the
		environment.

Click the **6** [Apply] button to confirm the settings or click the **7** [Reset] button to re-enter the parameters.

How it works

An important feature in this screen is that user may now customize the illumination level to perform day/night mode switches.

On the horizontal brightness meter shown here, there are three colored bars. The bar represents light amplifying levels 0 to 100, where 0 is Brightest and 100 is darkest. 0 means no digital amplification of incoming light signals, which means that the environment is bright enough for the camera to get good quality images.

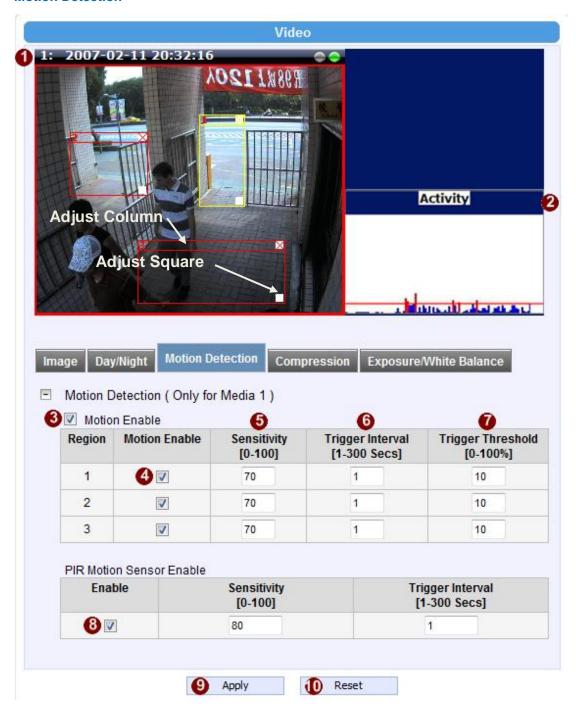
When the environment gets darker, as when the sun is setting over the horizon, the environmental gets darker. To maintain proper image brightness level, the camera will attempt to digitally amplify the light signals received by the sensor. The Blue one is the level at which camera will go into night mode, and remove Mechanical IR cut filter and open IR LED if available. The red one indicates the illumination level at which the camera will consider bright enough to go back to day (Color) mode.

The Red bar should always be to the left of the blue bar. As camera go from day to night mode, more lights are allowed inside (the IR filter is removed), so the detected light signal level will increase. If the night-to-day illumination level is too close to the day-to-night level, the camera will immediately consider it bright enough to go back to day mode, which will result in continuous day/night switching.

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Motion Detection



Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

Video Motion Detection:

STEP1: Click the Plus sign **3** to expand the Motion Detection settings then Click the Motion Enable checkbox to enable motion detection.



STEP2: Click the 4 checkbox to enable motion detection for each individual region.

STEP3: Click one region to start to edit its size and location. You can click the "Adjust Column" to drag motion region to your desired location. You can click the "Adjust Square" and drag to adjust motion region size. You can click the upper right button to cancel this motion region. Repeat above procedure to adjust the motion region.

STEP4: Set the **6** sensitivity of motion detection region.

STEP5: Set the **6** interval time of motion detection. After a motion event is triggered, no more events will be triggered within this time in the same region

STEP6: Set the trigger threshold of motion detection region. The larger this value, the larger the object size needed to trigger motion detection.

STEP7: In motion activity window, the bar shows the motion activity status. You can also see the trigger threshold (Red line). When the motion activity exceeds the trigger threshold, the bar would become red to indicate that a motion event has been triggered.

While viewing the motion activity window, you can adjust the motion sensitivity (the higher, the easier camera considers video change to be an activity) and the threshold (the higher, the larger the activity needed to trigger a motion event). If the default settings are not satisfactory for your scene, you may try our alternative recommendations of:

Sensitivity: 80, Threshold: 2~5 (for normal environment)

Sensitivity: 80, Threshold: 5~10 (for very noisy environment)

PIR (Passive Infra Red motion sensors) (Not available to all models)

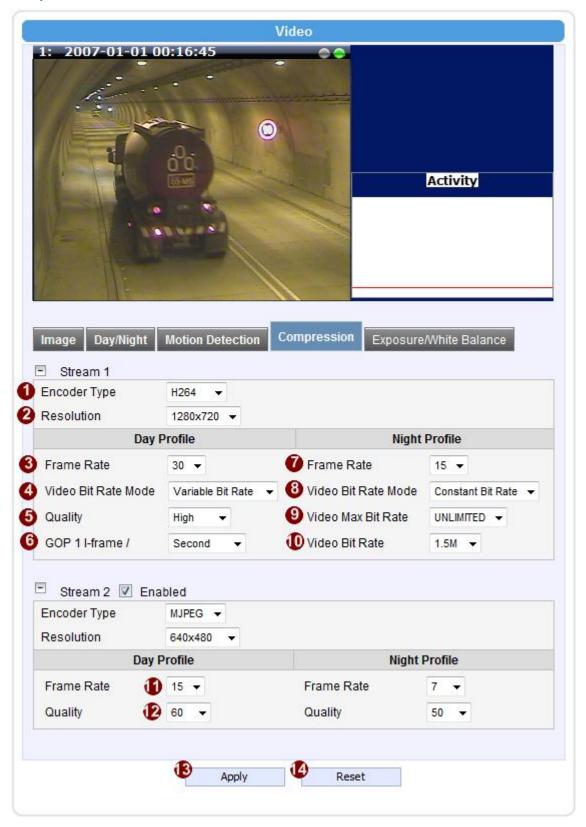
PIR sensors are available for some models. For the models with PIR, there will be a PIR Motion Sensor section below the video motion detection.

You may enable PIR sensors by the checkbox **(8)** and modify the sensitivity/ trigger interval. When motion is detected via PIR sensor, a red border will show around the whole view area.

Please note that PIR sensors have a shorter range of detection than Video motion detection.



Compression



There are two streams output available for this network device. Click the [Stream 1] or [Stream 2] item to display the content page, Contents for both stream are identical. Refer to the table below for how to configure each setting.

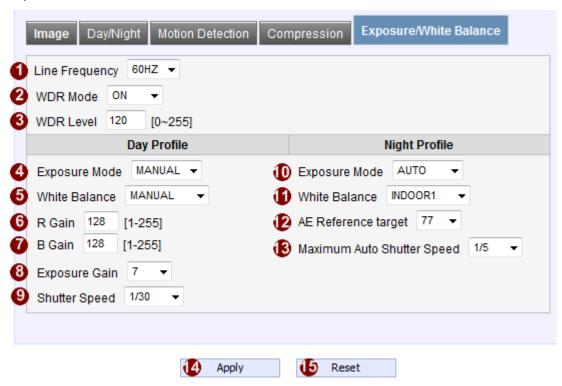


	Parameters	Description
_		Select the encoder's compression type.
O	Encoder Type	MPEG-4 / MJPEG / H.264
2	Resolution	Select the video resolution of the IP device.
3	Frame rate	Select the available frame rate from the drop down menu.
		Select the video bit rate mode.
	Video Bit Rate	Constant Bit Rate: The bit rate remains constant at all conditions.
4	Mode	Variable Bit Rate: The video bit rate will vary based upon scene
		complexity and amount of movement. The quality will remain the same.
	Quality	When encoder type is MPEG4 or H.264, and video bitrate mode is
9	Quality	"Variable Bit Rate" Select the quality value from High / Medium / Low
	•	When encoder type is MPEG4 or H.264. and video bitrate mode is
•	COD Longth	"Variable Bit Rate". Select the Interval between two I-frames. This is also
6	GOP Length	called GOP Length. (Group of Picture) . Default value is one I frame per
		second. The maximum length of GOP is limited to 60.
		Select the available frame rate from the drop down menu.
		This puts a hard cap on the maximum bit rate allowed in any given
7	Frame rate	second of video streaming. Assigning a limited bit rate may result in a
		few dropped frames rate when the stream data overflows the allowed bit
		rate. Doing so will also disable Bit Rate setting below.
8		Select the video bit rate mode.
	Video Bit Rate	Constant Bit Rate: The video bit rate remains constant at all
	Mode	conditions.
	Mode	Variable Bit Rate: The video bit rate will vary based upon scene
		complexity and amount of movement. The quality will remain the same.
		This puts a hard cap on the maximum bit rate allowed in any given
9	Video Max	second of video streaming. Assigning a limited bit rate may result in a
	Bitrate	few dropped frames rate when the stream data overflows the allowed
		bit rate. Doing so will also disable Bit Rate setting below.
		This is the target bitrate that the camera will attempt to provide when
10	Video Bitrate	using Constant Bitrate mode. The actual value will fluctuate slightly
		based on scene changes.
_	Frame rate (Stream2)	Select the frame rate for each profile by choosing from the drop down
•		list. Frame rates available for stream 2 may be less than stream 1,
	· · · · · · · · · · · · · · · · · · ·	depending upon the setting.
12	Quality	When encoder type is MJPEG:
•	Quanty	Select the quality value of MJPEG encoder type from 1 to 100.



Click the (Apply) button to confirm the settings or click the (Apply) button to re-enter the parameters.

Exposure / White balance



0	Line Frequency	Change settings between 60Hz or 50Hz, depending on the AC power type of your region
2	WDR Mode	This determines if the WDR processing is turned on or off. Turn this on only when you have very large brightness differences in a single scene. Otherwise leave it off.
3	WDR Level	The strength of image modification by WDR algorithm. Increasing this will increase the effect of WDR processor.
4	Exposure Mode	Select exposure mode to auto or manual. 1. Auto: The IP camera will adjust the exposure automatically. 2. Manual: Manually select the Exposure Gain and Shutter Speed below Day and



		night mode change will not operate as normal
		under manual Exposure.
		Select the white balance mode. After you set the
		parameter, you need to wait for 5~10seconds to see the
		final result.
		AUTO : Auto white balance (default)
		INDOOR1: Select the indoor white balance
		profile 1.
		INDOOR2: Select the indoor white balance
		profile 2.
		OUTDOOR1: Select the outdoor white balance
		profile 1.
6	White Balance	5. OUTDOOR2: Select the outdoor white balance
		profile 2
		6. HOLD: Select this to let the IP camera
		automatically obtain a best white balance
		setting according to current environment. The
		IP camera will use this setting to adjust color.
		NOTE: This setting will be lost after you
		reboot the camera.
		7. MANUAL: Select this to enable manual setting
		of the white balance. You will need to enter the
		R Gain and B Gain setting below.
	R Gain	Add or decrease redness to the video when under
6	(Manual White balance	Manual White Balance mode. (This function is only
	mode only)	available in Manual White balance mode.)
	B Gain	Add or decrease blueness to the video when under
0	(Manual White balance	Manual White Balance mode. (This function is only
	mode only)	available in Manual White balance mode.)
8	Exposure Gain (In Manual	Select the exposure Gain of the IP camera. The higher
	Exposure Mode only)	the value = brighter images. (1 ~ 255)
_	Shutter Speed	Increase or decrease the shutter speed. The closer the
9	(In manually shutter mode	number is to 1, the better nighttime performance is,
	only)	although this also causes motion blur to the video.
		Select exposure mode to auto or manual.
10	Exposure Mode	Auto: The IP camera will adjust the exposure
		automatically.

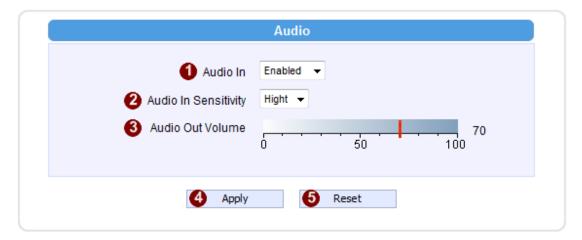


		Manual: Manually select the ⁸ Exposure Gain and
		Shutter Speed below.
1	White Balance (In Indoor/Outdoor/Auto/Hold profiles only)	Select the white balance mode. After you set the parameter, you need to wait for 5~10seconds to see the final result. 1. AUTO: Auto white balance (default) 2. INDOOR1: Select the indoor white balance profile 1. 3. INDOOR2: Select the indoor white balance profile 2. 4. OUTDOOR1: Select the outdoor white balance profile 1. 5. OUTDOOR2: Select the outdoor white balance profile 2 6. HOLD: Select this to let the IP camera automatically obtain a best white balance setting according to current environment. The IP camera will use this setting to adjust color. NOTE: This setting will be lost after you reboot the camera. For all the settings above, you will need to setup the value for AE Reference Target and Maximum auto shutter speed. 7. MANUAL: Select this to enable manual setting of the white balance. You will need to enter the R Gain and B Gain setting below.
12	AE Reference Target	This is the desired image brightness output level. The camera will attempt to change the exposure levels or digital amplification levels to achieve this level of brightness. Increasing this may provide a brighter image, but if there are extremely dark areas, this may also create slightly more noise in the underexposed
13	Maximum auto shutter	The maximum allowed time for the camera to take a
	speed	single image.

Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.



Audio



0	Audio In	Select to enable or disable the audio in function.
2	Audio In sensitivity	Select the sensitivity of audio microphone.
3	Audio Out Volume	Adjust the Audio Out volume.

Click the 4 [Apply] button to confirm the settings or click the 5 [Reset] button to re-enter the parameters.

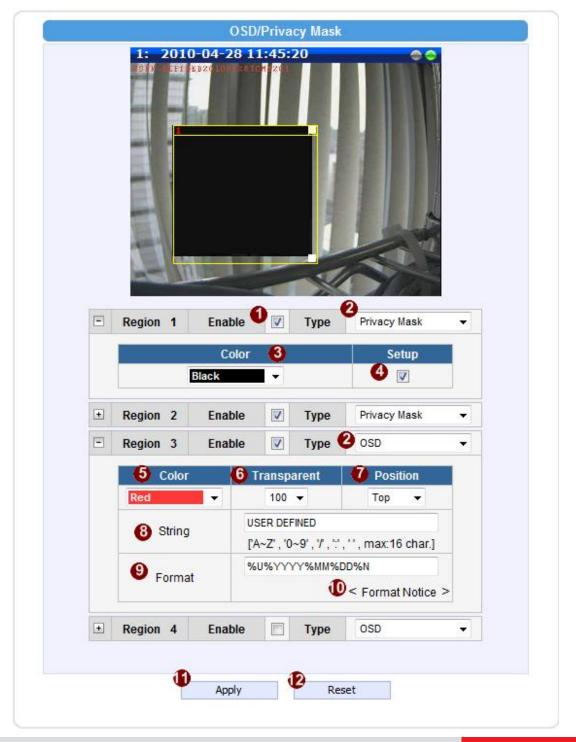
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OSD/Privacy Mask

OSD (On Screen Display) and Privacy masks are configured in this section. There are four regions available. Each may be used either as a Privacy mask or an OSD text.

Privacy Mask is not available in Dual Stream mode. Please disable Stream 2 if you wish to use Privacy mask / OSD. Please go to Video & Audio -> Video -> Compression tab to configure Stream 2.





	Parameters	Description
0	Enable	Check this box to enable each OSD / Privacy mask region
•	OSD / Privacy	Each region can be in one of two types. OSD (On Screen Display) or
•	mask	Privacy mask
3	Color (Privacy	This determines the color of the Privacy Mask Area. You may choose
9	mask)	between Black, Green, Red and Blue.
		Click this checkbox to enable Privacy mask area setup. Click and drag
	Setup	the adjust square at the lower right to change dimensions, click and
•	Setup	drag the adjust column at the top to move. (Similar to Motion Detection
		Region)
6	Color(OSD)	This determines the color of the OSD Text. You may choose between
•		Black, Green, Red and Blue.
		This number determines the level of transparency for this OSD Text. 1
6	Transparent	means that the background between the texts will not be visible, while
		100 means the background will show through the OSD text.
7	Position	Select the location where the text will appear in the image.
8	String	This is where you enter the user defined string (%U) as described in the
•		next section. Total length cannot be more than 63 characters
		This controls what is shown in the OSD text. You can click the Format
9	Format	Notice to the corner for a full list of available parameters. The OSD text
		is primarily based upon this field.
10	Format Notice	Click here to see the syntax list of how to configure the OSD text.

Click the [Apply] button to confirm the settings or click the [Reset] button to re-enter the parameters.

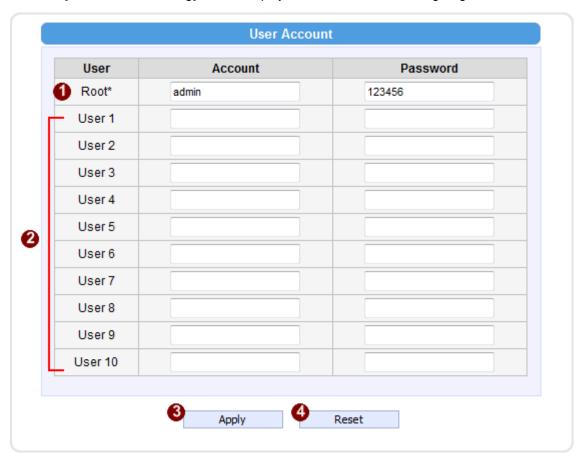
System

Click the [System] item on the "Setup Page".



User Account

Click the [User Account Setting] item to display the "User Account Setting Page".



Setup the account names and their respective passwords. There are 1 root (administrator) account and 10 common user accounts 2. Administrator account allows the user to watch



the live view and setup everything; but common user account allows user only to watch the live image.

Click the **(3)** [Apply] button to confirm the settings or click the **(4)** [Reset] button to re-enter the parameters.

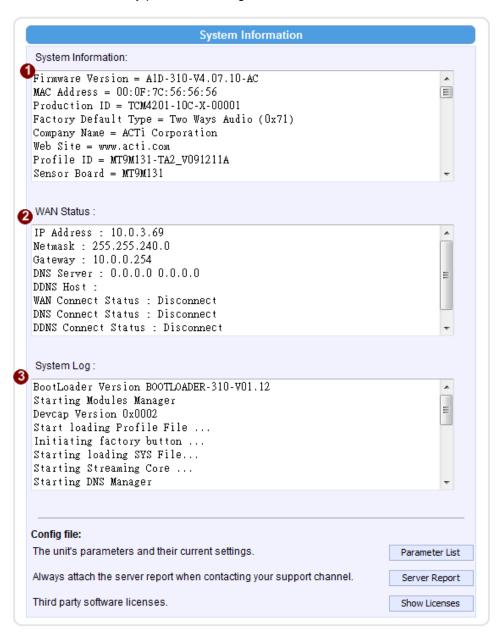
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System Info

Click the [System Info] item to display the "System Information Page". This shows details about this IP device including system information, WAN status and system log. Refer to the table below for how to configure each setting.

View the information at the 3 textboxes. This information is very useful to understand the IP device status and to resolve any problem that might occur.



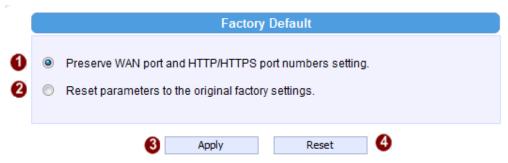


	Column	Description
		It shows the firmware version, MAC address, production ID, and factory
U	System info	default type of IP device.
2	WAN status	It shows the WAN port's IP address, netmask, gateway, DNS server,
		DDNS host and connection status.
•	System log	It shows the system event. This column is very useful to as a diagnostic
9		tool.

support to your support channel.

Factory Default

Click the [Factory Default] item to display the "Factory Default Page".



If you want to keep network settings and restore other settings to factory default, please click radio box 10. If you click 22 instead, all the settings would be lost. You will have to use factory default IP setting to connect to this camera. Please refer to previous login section. If you want to reset all setting to default, click to select this radio box 22.

Click the [Apply] button to show a warning dialog that reminds you again before restoring the device to factory default.

Firmware Upload

Click the [Firmware Upload] item to display the "Firmware Upgrade Page". Upgrade the IP device's firmware through this page with the following instructions. You may upgrade firmware for individual cameras with this function. To upgrade camera firmware in batches, please use IP utility, which can be freely downloaded from website. The firmware file you download from website will contain one .upg file, and one .md5 file. Uploading firmware through Web Configurator uses only the .upg file. You will need both files if you are doing multiple upgrades with IP Utility.



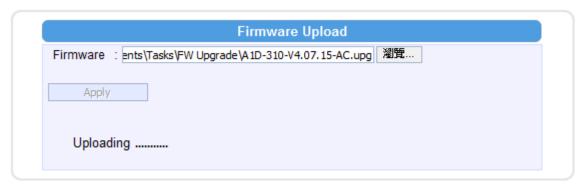
Click **1** [Apply] button. The 'Firmware Upgrade Page-2" will be displayed as below.



Click the 4 [Browse] to select the upgrade image file and click the [enter]. You can always get the latest version at our website.

Click the (3) [Apply] button to start upgrading

The upgrade process window will show a progress bar indicating upgrade status.





Once the process is finished, the progress bar will show the upgrading as OK, and reboot the IP device system.

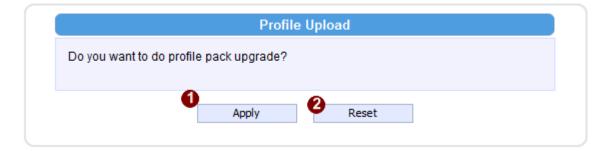
NOTE: If you cancel the firmware upgrade during upgrade process, the browser window will be closed

Profile Upload

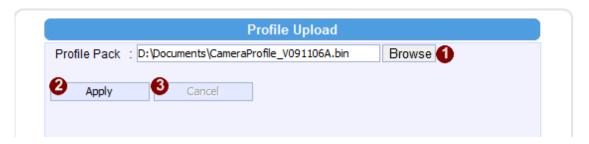
Profiles are sets of parameters that control how the image sensor behaves. Sometimes profiles are fine-tuned again to suit a specific environment, or for generally better image. They are not updated as frequently as firmware, and a good profile can stay in use for a very long time.

Occasionally, you may wish to load a new profile pack into your camera. This section tells you how to upgrade IP Camera's Profile Pack.

Click the [Profile Upload] item to display the "Profile Upload Page".



STEP1: Click 1 [Apply] button. The "Profile Pack Page-2" will be displayed as below.





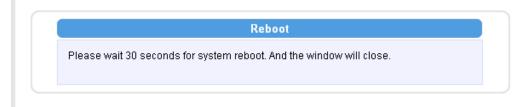
STEP3: Click the (2) [Apply] button to start upgrading

STEP5: The upgrade process window shows a progress bar indicating upgrade status.

STEP6: The system will reboot after profile upload.

Save & Reboot

This section tells you how to save all the settings and reboot this IP device. This is critical because some settings might not take effect before save and reboot. Click the [Save & Reboot] item to display the "Reboot Page".



The Action LED indicator will go dark to indicate that the IP device is rebooting. After around 30 seconds, the Action LED will light up again to indicate that the reboot is completed.

Logout

Clicking this item allows you to log out of the IP device. Be sure to logout this IP device once your setting is completed.